Title: The Effects of Statins on Intima-Media Thickness in Patients Who Had ACS

ABSTRACT

Background

Statins have been established by definitive primary and secondary cardiovascular prevention trials as the cornerstone of pharmacoprevention of atherosclerotic vascular disease. Carotid arterial intima-media thickness is used as a noninvasive surrogate end point in epidemiologic studies and clinical trials to gauge progression and regression of atherosclerosis. In this trial, we compared the effects of a high-potency statin with different dose (atorvastatin 20 mg/d and atorvastatin 40 mg/d) on carotid intima-media thickness (CIMT).

Methods

This was a randomized, single blinded clinical trial that performed on 100 patients with ACS diagnosis. The effects of atorvastatin (20 mg/d; n=50) and atorvastatin (40 mg/d; n=50) on CIMT were compared using serial assessment of the thickness of common carotid artery.

Results

The mean patient age was 52 years and 74% were male. Baseline CIMT and other characteristics were similar between study groups. CIMT was stable in the both study groups after 6 months and there were no meaningful statistical differences observed between study groups (change in CIMT, 0.044 ± 0.169 and -0.006 ± 0.168 mm; p=0.14).

Conclusions

This comparative trial shows that the use of atorvastatin 20mg/d and 40mg/d in short term have similar effects on carotid intima-media thickness. However, intensive statin therapy may has been shown to yield improvement in atherosclerosis with measurement of the carotid intima-media thickness.

Key words: atherosclerosis, statins, carotid intima-media thickness